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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,177	12/12/2003	Francesco Gropallo	206,383	1657

7590 12/12/2007

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EXAMINER	
STONER, KILEY SHAWN	
ART UNIT	**PAPER NUMBER**
1793	

MAIL DATE	DELIVERY MODE
12/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/735,177	GROPALLO, FRANCESCO	
	Examiner	Art Unit	
	Kiley Stoner	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 2,6,10,12-15,18,20 and 21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 2, 10, 12-13, 15, 18 and 20-21 is/are rejected.

7)☒ Claim(s) 6 and 14 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 20, 2, 6, 10 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 20, it is unclear to the examiner as to whether the claimed "a preformed metal wire ring" is the same as the claimed "a brazing filler metal". In view of the applicant's specification it appears the claimed metals are the same component; however, the pending claims reads as if the metals are two different components.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Asano (JP-410230356A).

With respect to claim 13, Asano teaches a brazing process to join two metal parts (abstract and Figures 1-4), said metal parts including a stopper (8) and a tubular manifold (1) having an end with an opening (Figures 1-2 and 4), wherein said stopper is brazed to close the open end of said tubular manifold (abstract and Figures), said stopper having an interface provided with a housing formed along the external edge of the stopper (Figures 1-2 and 4), said process comprising positioning of a filler metal on the stopper (paragraphs [0016]-[0029] of the translation); fixedly aligning the metal parts to be joined, wherein said filler metal is positioned inside said tubular manifold prior to melting (paragraphs [0016]-[0029] of the translation); and heating said parts to a temperature at which the filler metal melts (paragraphs [0016]-[0029] of the translation).

With respect to claim 15, Asano teaches that a portion of the housing includes a step that is inserted in said tubular manifold, wherein said step forms a junction with an internal surface of the manifold to be brazed (Figures 1-2 and 4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asano (JP-410230356A).

With respect to claim 18, Asano does not explicitly teach that the metal parts to be joined of a towel-rack radiator; however, the examiner takes Official Notice that towel-rack radiators are well known. In addition, it is the examiner's position that it would have been obvious to one of ordinary skill in the art that the braze joint of Asano could be implemented on any heat exchanging that includes a manifold. Thus, it would have been obvious to implement the process of Asano to form a towel-rack radiator.

Claims 2, 10, 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinrich et al. (US 4,519,537) in view of Schmunk (US 3,565,117).

With respect to claim 20, Heinrich et al. teach a brazing process to join two metal parts (2,3), said metal parts including (i) a tube (3) having an end (ii) a tubular metal part (2) delimiting an internal cavity (Figure), the tubular metal part having a lateral wall with an inner wall surface (Figure), at least one hole in the lateral wall communicating with said internal cavity (Figure), a preformed metal wire ring (7,7') being positioned around the end of said tube (Figure), wherein the end of said tube is brazed into said hole (Figure; and column 3, line 41-column 4, line 15), the process comprising the steps of: positioning a brazing filler metal on the end of said tube (Figure), fixedly aligning the metal parts to be joined with the

portion of the metal tube with said filler metal positioned within said internal cavity proximate the inner wall surface, prior to melting (Figure; and column 3, line 41-column 4, line 15); and heating said parts to a temperature at which the filler metal melts, whereby a brazed joint is formed between the two metal parts (Figure; and column 3, line 41-column 4, line 15).

Heinrich et al. does not explicitly teach a preformed metal wire ring being positioned around the end of said tube in a groove formed in the tube. As illustrated by Figures 1 and 2 of Schmunk, it is well known to secure a ring shaped object to a tube in a recessed groove. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to implement a ring shaped groove on the tube (3) of Heinrich et al. in order to hold the soldering ring in the desired position during the bonding process.

With respect to claim 2, Heinrich et al. teach said heating step is carried out in a furnace (column 3, line 67-column 4, line 15).

With respect to claim 10, it is the examiner's position that the shape of the tube is a design choice and it would have been obvious to one of ordinary skill in the art that the tube (3) of Heinrich et al. could have been tapered without affecting the bonding process.

With respect to claim 12, Heinrich et al. is silent with respected to the distance that the tube is inserted into the hole; however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the end of the tube inserted into the hole so as to protrude into the inside of the tubular part a distance of from 1 to 3 mm, since it has been held that

discovering an optimum value or a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). The artisan would have been motivated to have the end of the tube inserted into the hole so as to protrude into the inside of the tubular part a distance of from 1 to 3 mm by the reasoned expectation of having enough surface area of the tube positioned within the tubular part to form an adequate bond.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heinrich et al. (US 4,519,537) in view of Schmunk (US 3,565,117).

With respect to claim 21, Heinrich et al. teach a brazing process to join two metal parts (2,3), said metal parts including (i) a tube (3) having an end (ii) a tubular metal part (2) delimiting an internal cavity (Figure), the tubular metal part having a lateral wall with an inner wall surface (Figure), at least one hole in the lateral wall communicating with said internal cavity (Figure), wherein the end of said tube is brazed into said hole (Figure; and column 3, line 41-column 4, line 15), the process comprising the steps of: positioning a brazing filler metal (7,7') on the end of said tube (3); fixedly aligning the metal parts to be joined with the portion of the metal tube with said filler positioned within said internal cavity proximate the inner wall surface, prior to melting (Figure; and column 3, line 41-column 4, line 15); and heating said metal parts to a temperature at which the filler metal melts, whereby a brazed joint is formed between the two metal parts (Figure; and column 3, line 41-column 4, line 15).

Heinrich et al. does not explicitly teach refashioning the end of the metal tube after it has been inserted into the hole; however, the examiner takes Official Notice that it is well known in the art to expand or flare the end of the tube which has been inserted into an opening in order to form a mechanical connection. Since the end of the tube that has been flared or expanded is bigger than the hole in which it was inserted the tube cannot be removed from the hole.

Allowable Subject Matter

Claims 6 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 2, 6, 10, 12-15, 18 and 20-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiley Stoner whose telephone number is 571-272-1183. The examiner can normally be reached Monday-Thursday (9:30 a.m. to 8:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jonathan Johnson can be reached on 571-272-1177.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

12/6/07

Kiley Stoner

Primary Examiner A.U. 1793